THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY		
New Jersey Core Curriculum Content Standards: Science – Grades 7 – 8		
Lesson	**Standard**	**Indicator**
1, 3, 4	**5.1.A.1**	Evaluate the strengths and weaknesses of data, claims, and arguments.
1, 2, 3, 4	**5.1.A.2**	Communicate experimental findings to others.
1, 3, 4	**5.1.A.4**	Recognize that curiosity, skepticism, open-mindedness, and honesty are attributes of scientists.
1, 3, 4	**5.1.B.1**	Identify questions and make predictions that can be addressed by conducting investigations.
4	**5.1.B.2**	Design and conduct investigations incorporating the use of a control.
1, 2, 3, 4	**5.1.B.3**	Collect, organize, and interpret the data that result from experiments.
2	**5.1.C.1**	Know when and how to use appropriate safety equipment with all classroom materials.
3	**5.5.A.2**	Recognize that complex multicellular organisms, including humans, are composed of and defined by interactions of the following: cells, tissues, organs, and systems.
All lessons	**5.7.B.2**	Describe the nature of various forms of energy, including heat, light, sound, chemical, mechanical, and electrical and trace energy transformations from one form to another.
New Jersey Core Curriculum Content Standards: Mathematics – Grades 7 – 8		
Lesson	**Standard**	**Expectation**
2, 3, 4, 5	**4.1.A.3**	Understand and use ratios, proportions, and percents (including percents greater than 100 and less than 1) in a variety of situations.
2	**4.1.A.5**	Use whole numbers, fractions, decimals, and percents to represent equivalent forms of the same number.
1, 2, 3, 4	**4.1.B.1**	Use and explain procedures for performing calculations with integers and all number types named above with: pencil-and-paper, mental math, or calculator.
1, 2	**4.2.D.2 (7^{th}) 4.2.D.4 (8^{th})**	Select and use appropriate units and tools to measure quantities to the degree of precision needed in a particular problem-solving situation.
1, 2, 3, 4	**4.3.A.1**	Recognize, describe, extend, and create patterns involving whole numbers, rational numbers, and integers: descriptions using tables, verbal and symbolic rules, graphs, simple equations or expressions.
1, 2, 3, 4	**4.3.C.1**	Analyze functional relationships to explain how a change in one quantity can result in a change in another, using pictures, graphs, charts, and equations.

All lessons	**4.4.A.2**	Make inferences and formulate and evaluate arguments based on displays and analysis of data.
1, 2, 3, 4	**4.5.A.2**	Solve problems that arise in mathematics and in other contexts (cf. workplace readiness standard 8.3): open-ended problems, non-routine problems, problems with multiple solutions, or problems that can be solved in several ways.
1, 2, 3, 4	**4.5.B.1**	Use communication to organize and clarify their mathematical thinking: reading and writing, discussion, listening, and questioning.
1, 2, 3, 4	**4.5.B.2**	Communicate their mathematical thinking coherently and clearly to peers, teachers, and others, both orally and in writing.
All lessons	**4.5.C.3**	Recognize that mathematics is used in a variety of contexts outside of mathematics.
All lessons	**4.5.C.4**	Apply mathematics in practical situations and in other disciplines.
1, 2, 3, 4	**4.5.D.6**	Evaluate examples of mathematical reasoning and determine whether they are valid.
1, 2, 3, 4	**4.5.E.1**	Create and use representations to organize, record, and communicate mathematical ideas.
1, 2, 3, 4	**4.5.E.2**	Select, apply, and translate among mathematical representations to solve problems.
All lessons	**4.5.E.3**	Use representations to model and interpret physical, social, and mathematical phenomena.
1, 3, 4	**4.5.F.1**	Use technology to gather, analyze, and communicate mathematical information.
1, 3, 4	**4.5.F.2**	Use computer spreadsheets, software, and graphing utilities to organize and display quantitative information.
New Jersey Core Curriculum Content Standards: Language Arts Literacy – Grades 7 – 8		
Lesson	**Standard**	**Indicator**
1, 3, 4, 5	**3.1.D.2**	Read increasingly difficult texts silently with comprehension and fluency.
All lessons	**3.1.F.1**	Develop an extended vocabulary through both listening and independent reading.
1, 3, 4, 5	**3.1.G.1**	Speculate about text by generating literal and inferential questions. (7)
All lessons	**3.1.G.15 (7^{th}) 3.1.G.13 (8^{th})**	Interpret text ideas through journal writing, discussion, and enactment.
All lessons	**3.1.H.1**	Produce written and oral work that demonstrates comprehension of informational materials.
3, 5	**3.2.B.4**	Write a range of essays, including persuasive, speculative (picture prompt), descriptive, personal, or issue-based.

All lessons	**3.2.C.1**	Use Standard English conventions in all writing, such as sentence structure, grammar and usage, punctuation, capitalization, and spelling.
All lessons	**3.2.C.8**	Write legibly in manuscript or cursive to meet district standards.
All lessons	**3.2.D.1**	Gather, select, and organize information appropriate to a topic, task, and audience.
3, 4, 5	**3.2.D.2**	Apply knowledge and strategies for composing pieces in a variety of genres (e.g., narrative, expository, persuasive, poetic, and everyday/ workplace or technical writing).
1, 3, 5	**3.2.D.9**	Demonstrate writing clarity and supportive evidence when answering open-ended and essay questions across the curriculum.
3, 5	**3.2.D.10**	State a position clearly in a persuasive essay by stating the issue, giving facts, examples, and details to support the position, and citing sources when appropriate.
3, 5	**3.2.D.11**	Present evidence when writing persuasive essays, examples, and justification to support arguments.
3, 5	**3.2.D.12**	Choose an appropriate organizing strategy, such as cause/effect, pro and con, or parody to effectively present a topic, point of view, or argument.
All lessons	**3.3.A.2**	Present ideas and opinions spontaneously in response to a topic or other speakers.
All lessons	**3.3.A.5**	Participate in an informal debate (e.g., small group discussion). (7)
All lessons	**3.3.A.7**	Participate in class discussions appropriately.
All lessons	**3.3.B.2**	Question to clarify others' opinions.
All lessons	**3.3.B.3**	Talk with others to identify and explore issues and problems.
All lessons	**3.3.B.4**	Solve a problem or understand a task through group cooperation.
All lessons	**3.3.C.2**	Develop and use advanced vocabulary related to a topic.
All lessons	**3.4.A.1**	Demonstrate active listening behaviors in a variety of situations (e.g., one-on-one or small group).
All lessons	**3.4.A.2**	Demonstrate active listening by analyzing information, ideas, and opinions to determine relevancy.
All lessons	**3.4.A.3**	Acknowledge the speaker through eye contact and use appropriate feedback and questions to clarify the speaker's message.
All lessons	**3.4.B.3**	Critique information heard or viewed.
New Jersey Core Curriculum Content Standards: Comprehensive Health and Physical Education – Grades 7 – 8		
Lesson	**Standard**	**Indicator**
1, 2, 3, 5	**2.1.A.2**	Evaluate the impact of health behaviors and choices on personal and family wellness.

All lessons	**2.1.A.3**	Interpret health data to make predictions about wellness.
4, 5	**2.1.A.4**	Investigate how technology and medical advances impact wellness.
3, 4	**2.1.B.1**	Discuss how body systems are interdependent and interrelated.
2, 3, 4, 5	**2.1.C.1**	Analyze how culture, health status, age, and environment influence personal eating patterns and discuss ways to improve nutritional balance.
All lessons	**2.1.C.2**	Describe healthy ways to lose, gain, or maintain weight.
3, 5	**2.1.C.4**	Analyze how healthy eating patterns throughout life can reduce the risk of heart disease and high cholesterol, cancer, osteoporosis, and other health conditions.
4, 5	**2.1.D.1**	Investigate current and emerging methods to diagnose and treat diseases and health conditions.
All lessons	**2.2.A.1**	Analyze health ideas, opinions, and issues from a variety of valid and reliable health sources.
3, 5	**2.2.B.1**	Demonstrate and assess the use of decision-making skills in health and safety situations.
3, 5	**2.2.B.2**	Compare and contrast the influence of peers, family, the media, and past experiences on the use of decision-making skills and predict how these influences may change or conflict as one ages.
1, 3, 4, 5	**2.6.A.1**	Summarize the potential short- and long-term physical, social, and emotional benefits of regular physical activity.
3, 4, 5	**2.6.A.5**	Describe ways to achieve a healthy body composition through healthy eating and physical activity.